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An Assessment of OMB's Draft of Guidelines to Help Agencies Estimate the Benefits and Costs of Federal Regulation

Robert W. Hahn

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Mr. Hahn is director of the AEI-Brookings Joint Center for Regulatory Studies, a resident scholar at American Enterprise Institute, and a research associate at Harvard University. The author benefited from the comments of Jason Burnett, Randy Lutter and Petrea Moyle.

J O I N T   C E N T E R

In response to growing concerns about understanding the impact of regulation on consumers, business, and government, the American Enterprise Institute and the Brookings Institution have established the AEI-Brookings Joint Center for Regulatory Studies. The primary purpose of the center is to hold lawmakers and regulators more accountable by providing thoughtful, objective analysis of existing regulatory programs and new regulatory proposals. The Joint Center builds on AEI's and Brookings's impressive body of work over the past three decades that has evaluated the economic impact of regulation and offered constructive suggestions for implementing reforms to enhance productivity and consumer welfare. The views in Joint Center publications are those of the authors and do not necessarily reflect the views of the staff, council of academic advisers, or fellows.

Executive Summary

The Office of Management and Budget has led efforts to develop guidelines for benefit-cost analysis of regulations based on widely accepted economic principles, most recently with the release of its draft 1999 guidelines. The draft is a good start, but needs substantial improvement. Moreover, good guidance is not enough; clear and concise presentation of results, rigorous oversight, and enforcement of quality standards are also necessary to raise the caliber of regulatory analyses and to encourage interested parties to compare analyses across agencies. To strengthen the impact of the guidelines, the OMB should be given greater authority to enforce quality standards and another agency outside the executive branch should be charged with assessing regulations and regulatory programs.

An Assessment of OMB's Draft of Guidelines to Help Agencies Estimate the Benefits and Costs of Federal Regulation

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1. Introduction

In September 1999, The Office of Management and Budget (OMB) issued a draft of guidelines to help agencies estimate the benefits and costs of federal regulation, required by Section 638 (c) of the 1999 Omnibus Consolidated and Emergency Supplemental Appropriations Act.[1] The draft guidelines provide a useful starting point to encourage agencies to improve their benefit-cost analyses of regulation. The OMB can, however, substantially improve the guidelines.

Numerous attempts within the government and outside of the government to improve regulation have resulted in more information on the building blocks of a good benefit-cost analysis. One of the better known is a monograph by Arrow et al. (1996), which examines how benefit-cost analysis can be used to improve health, safety and environmental regulation.[2] These studies help identify general principles that define a good benefit-cost analysis of a particular regulation, and provide useful guidance to conduct such analyses. The OMB's guidelines build on these previous efforts.

This paper focuses on four separate issues: first, improving the OMB's draft guidelines; second, providing better summary information on regulations to enhance the transparency of regulatory analyses; third, measuring the effect of guidelines and other efforts aimed at improving the quality of regulatory analyses; and fourth, improving the likelihood that guidelines will have the desired effect.

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[1] OMB (1999).

[2] There are a number of other documents done outside the government that attempt to distill principles related to risk analysis or benefit-cost analysis, and regulatory reform. See, e.g., Committee for Economic Development (1998); Business Roundtable (1995); Crandall et al. (1997); and Hahn and Litan (1997). For some guidelines issued by the government, see OMB (1996).

2. Recommendations for Improving the Guidelines

The following recommendations broadly outline how OMB could strengthen the guidelines to improve agency analyses.

#1 Use a Common Set of Assumptions

The guidelines should emphasize the need to develop analyses that are comparable across agencies. A common set of assumptions regarding key parameters, such as discount rates and valuation of mortality risk reduction, is important for two reasons. First, it is easier to compare such analyses across agencies, currently an arduous task.[3] Second, it could help limit the amount of discretion an agency can exercise in manipulating the analysis to achieve its preferred outcome.

The argument against having a common set of assumptions is that different parameter values may be justified in different settings. That argument also has merit. It can be addressed by allowing agencies to use analyses with a common set of assumptions for their "base case" as well as alternative analyses that agencies feel better reflect underlying economic and scientific realities. These cases can then be compared to see if they suggest different policy choices.

#2 Describe Market Failures in More Detail

The OMB instructs the agency to discuss whether there is a large market failure, the existence of which suggests the possible need for government intervention. No markets function perfectly so the mere existence of a market failure is not sufficient to justify government intervention, even when that intervention is intentionally benign. To the extent

[3] For more information about the difficulty of comparing analyses, see Hahn (1999b).

reasonable, the agency should be asked to explain why the market failure is likely to be *significant* in both qualitative and quantitative terms.[4]

#3 Evaluate a Reasonable Set of Alternatives

Agencies frequently choose a preferred option and evaluate alternatives that are likely to look unattractive relative to their preferred option. While such a strategy may help the agency further its agenda, it can lead to bad public policy. The guidelines should urge the agency to select those alternatives that are likely to be the best competitors to the preferred option in terms of maximizing net benefits. At the very least, the agency should be required to explain its economic rationale and justify its choice for selecting alternatives to the preferred option.

#4 Quantify and Monetize Costs and Benefits, if Reasonable

The draft guidelines discuss quantifying and monetizing benefits and costs, whenever possible. The OMB should more clearly define "whenever possible" in the guidelines, and provide examples. Moreover, agencies should only monetize benefits and costs only if they use commonly accepted values or procedures, or if key analytical assumptions are defensible.

#5 Develop Base Case Benefit and Cost Estimates that Reflect Central Tendencies

The agency sometimes uses conservative assumptions in its development of risk estimates that lead to overestimates of risk, rather than central tendencies.[5] Such assumptions should not be used in developing best estimates.

[4] For examples of a quantitative and qualitative assessments of market failures, see Morrison et al. (1998) and Moyle (1999).

[5] See, e.g. Nichols and Zeckhauser (1986) and Hamilton and Viscusi (1999).

#6 Assess and Quantify All Identifiable Effects of a Rule

Agencies do not always assess and quantify all identifiable effects of a rule in regulatory impact analyses. The EPA, for example, did not quantify the positive impacts of ozone formation on preventing skin cancer.[6]

#7 Provide Detailed Information about Unquantifiable Benefits[7]

Agencies sometimes assert that the net benefits of a rule are positive because of benefits the agency is unable to quantify. Yet research at the Joint Center reveals that agencies often do not provide detailed information about these important benefits.[8] For cases in which the presence of unquantifiable benefits affects an agency's policy choice, the agency should provide a clear explanation of its rationale. Such an explanation could include information on the nature and distribution of the benefits. The agency should further include a table in each regulatory impact analysis that lists all the unquantifiable benefits, ordered by expected magnitude if possible.

#8 Provide Better Uncertainty Analysis

Research at the Joint Center has shown that less than half of the major regulatory impact analyses identify the source of uncertainty, and almost no analyses present more detailed probability distributions than a "reasonable range." It is unlikely that the current language in the guidelines is going to encourage agencies to improve the presentation of uncertainty. OMB should provide more concrete guidance, perhaps supported by examples, on how to calculate and present uncertainty. Such guidance may include recommendations on the use of

[6] The inclusion of these benefits changes the EPA's estimate of the overall benefits from its new air quality standard for ozone. See, e.g., Lutter and Wolz (1997), AEI-Brooking Joint Center for Regulatory Studies, Conference Summary (1998), and Lutter and DeMuth (1999).

[7] Agencies should also provide detailed information about unquantified costs, such as the impact of regulation on innovation, the cost of redirecting company employees to manage regulatory issues, and other indirect economic impacts.

[8] Hahn et al. (forthcoming).

subjective probability distributions.

#9 Use Contingent Valuation Methods With Caution

Contingent valuation methods should be used only if they are likely to add significant new insight in the analysis of a regulation, and they are subject to some basic tests for quality control. While analysts disagree about precise conditions, a number of attempts have been made to define conditions under which contingent valuation methods could provide useful insights on willingness to pay.[9] At the very least, the agency should use contingent valuation estimates from studies that follow the recommendations of the 1994 NOAA panel.[10] The agency should further note when an estimate is drawn from a contingent valuation study that does not meet those guidelines, and adjust such estimates as appropriate.

#10 Treat Cost Savings as a Category Separate from Costs and Benefits

Sometimes agencies argue that a regulation will result in significant cost savings to firms or consumers. Cost savings should be treated as a category separate from costs and benefits for two reasons: first, to allow interested parties to evaluate the agency's often controversial estimates of cost savings; and second, to increase the ease with which interested parties can replicate the agency's results or use the results in deriving their own estimates.

#11 Discount for Latency

The OMB guidelines should emphasize that health impacts that occur after some latency period should be discounted like all other costs and benefits. Often agencies do not appropriately account for latency when they estimate lives saved and other health impacts for regulatory impact analyses.

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[9] See, e.g., NOAA (1994), Diamond and Hausman (1994), and Arrow et al. (1996).
[10] NOAA (1994).

#12 Assume a Reasonable Degree of Compliance

> Agency analyses frequently assume full compliance with the regulation, which is the exception rather than the rule. Whenever feasible, agencies should consider cases that analyze partial compliance to obtain a better estimate of the likely costs and benefits.

3. Providing Better Summary Information

The provision of useful summary information about the economic effects of regulation is an important first step toward a better understanding of the implications of regulatory activities. If the public and interested parties have greater access to information about the costs and benefits of proposed regulations, final regulations are more likely to achieve their objective at a lower cost. Agencies usually do not, however, provide such information in an accessible format. Although the current OMB guidelines will help improve the quality of agency economic analyses, they do not address the need for better summary information. A structured format for the executive summary could help provide greater transparency.

Agencies sometimes do not provide executive summaries for complex regulatory impact analyses. A study of 44 regulatory impact analyses from mid-1996 to 1999, for example, shows that the agency provided an executive summary for only 55%.[11] The executive summaries provided by the agencies varied in quality and lacked consistency. The recommendation to introduce a structured executive summary for RIAs is not new; economists have long recommended that executive summaries contain basic information about key assumptions, base case results, and sensitivity analyses.[12] Agencies could, for example, fill out a "Regulatory Impact Statement (RIS)" for each significant regulation. The RIS could be divided into four parts: background on the rule, the overall impact of the rule, a description of the costs and benefits, and an examination of regulatory alternatives.[13] In addition, the RIS should be published in the *Federal Register*, a central repository

[11] Hahn et al. (forthcoming).
[12] Arrow et al. (1996).
[13] See e.g., Hahn (1999a).

for information on regulation.

4. Measuring the Effect of Guidelines and Other Reform Efforts

Careful evaluation of reform efforts is necessary to determine which reform measures actually improve regulatory outcomes and which do not. Unfortunately, the difficulty of evaluating the impact of reform measures has prevented many scholars from undertaking comprehensive studies.[14] By designing a study to measure the impact of its new guidelines, the OMB would set an example for others to follow. Most importantly, such a study would improve the likelihood that the guidelines will have the desired effect.

The impact study should compare the quality of analyses before and after the release of the new guidelines. The OMB could model its study after an ongoing project at the AEI-Brookings Joint Center, designed to measure the quality of agency regulatory impact analyses. The project is described in detail in a forthcoming Joint Center working paper. Researchers at the Joint Center filled out a “scorecard” for each regulatory impact analysis to record whether the agencies followed widely-accepted standards for economic analysis, such as the use of a consistent discount rate and baseline. The OMB could fill out such a scorecard for regulations proposed before and after the release of the guidelines.

5. Increasing the Likelihood that Regulatory Analyses Will Be Improved

There are a number of ways to improve agency economic analyses.[15] One is to have agencies within the government play a greater role in assessing such analysis; a second is to have external groups, such as the Joint Center, play such a role.[16] Both are valuable. Outside the government, the growing number of groups that provide information to help improve regulatory analyses include the Joint Center, the Mercatus Center at George Mason University, and the Center for the Study and Improvement of Regulation at Carnegie Mellon University.[17] These groups have the potential to

[14] See Hahn (1999b).
[15] See, e.g., Hahn (1997), Crews (1997), Lutter and Wolz (1997), and Sunstein (1999).
[16] See Breyer (1993) for a description of other approaches.
[17] For a complete list of organizations that study the impact of regulations on the economy and reform trends, please

make a difference by providing objective, detailed analyses of the costs and benefits of particular regulations and programs. Inside the government, it would be useful to have a separate agency, outside the executive branch, charged with evaluating the impact of regulation.[18] Such an agency would compete with the existing oversight office within the OMB. The competition would yield better regulatory analysis and give Congress better information on which to make judgments about regulatory policies.

In addition, OMB could be given additional powers to help enforce the guidelines. These could include requirements that an agency consult with OMB on the development of basic economic frameworks and alternatives. The OMB also could be given the express authority to defer regulations with a weak analytical basis. The problem with this approach is, to some extent, it reflects the status quo. The status quo has not been very successful in ensuring that the agencies produce high quality regulatory analyses, however. While OMB could be given more power in principle to help bring about such a result, it is unlikely to happen for political reasons.

6. <u>Conclusion</u>

OMB has probably reached the point of diminishing returns in improving its agency guidelines on benefit-cost analysis. Until further mechanisms are devised to improve enforcement of such guidelines, the quality of regulatory analyses is not likely to change dramatically as a result of government guidelines aimed at improving such analysis, no matter how clearly written.

Outside efforts could yield some fruit. The essential approach here is to critically review agency proposals and programs in ways that generate new knowledge or insights on important regulatory matters. Several non-partisan groups have begun the arduous task of providing detailed economic analysis of specific regulations. Noll has argued that such analyses can help to improve

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visit the AEI-Brookings Joint Center's web site at http://www.aei.brookings.org/about/links.htm.

[18] In testimony before a subcommittee of the House Committee on Government Reform and Oversight last year, Robert Litan and I endorsed the establishment of such an oversight agency.

regulation and increase the pace of regulatory reform.[19] The Joint Center is betting that he is right, but the proof remains in the tasting of the pudding.

[19] Noll (1999).

References

AEI-Brookings Joint Center for Regulatory Studies. 1998. *EPA's Trillion Dollar Estimate of Clean Air Benefits: Are We Talking About Real Money?* Conference Summary. Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies.

Arrow, Kenneth J., Maureen L. Cropper, George C. Eads, Robert W. Hahn, Lester B. Lave, Roger G. Noll, Paul R. Portney, Milton Russell, Richard Schmalensee, V. Kerry Smith, and Robert N. Stavins. 1996. *Benefit-Cost Analysis in Environmental, Health, and Safety Regulation: A Statement of Principles.* Washington, D.C.: AEI Press.

Breyer, Stephen. 1993. *Breaking the Vicious Circle: Toward Effective Risk Regulation.* Cambridge, MA: Harvard University Press.

Business Roundtable. 1995. *Toward Smarter Regulation.* Washington, D.C.: Business Roundtable.

Committee for Economic Development. 1998. *Modernizing Government Regulation: The Need for Action.* New York: Committee for Economic Development.

Crandall, Robert W., Christopher DeMuth, Robert W. Hahn, Robert E. Litan, Pietro S. Nivola, and Paul R. Portney. 1997. *An Agenda for Federal Regulatory Reform.* Washington, D.C.: AEI Press and Brookings Institution Press.

Crews, Clyde Wayne. 1997. *Creating a Regulatory Report Card: Toward Maximum Disclosure in the Regulatory State.* Washington, D.C.: Competitive Enterprise Institute.

Diamond, Peter A., and Jerry A. Hausman. 1994. "Contingent Valuation: Is Some Number Better *than No Number?" Journal of Economic Perspectives* 8(4): 45-64.

Hahn, Robert W. 1997. "Achieving Real Regulatory Reform." *The University of Chicago Legal Forum* (1997): 143-158.

______. 1999a. "Changing the Federal Register to Improve Regulatory Accountability." *Regulation* 22(4): 16-19.

______. 1999b. *Regulatory Reform: Assessing the Government's Numbers,* Working Paper 99-6. Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies.

Hahn, Robert. W., Jason Burnett, Irene Chan, Elizabeth Mader, and Petrea Moyle. forthcoming. *A Scorecard for Regulation Impact Analyses,* Working Paper. Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies.

Hahn, Robert W., and Robert E. Litan. 1997. *Improving Regulatory Accountability.* Washington, D.C.: AEI Press and Brookings Institution Press.

Hamilton, James T. and W. Kip Viscusi. 1999. *Calculating Risks? The Spatial and Political Dimensions of Hazardous Waste Policy*. Cambridge, MA: The MIT Press.

Lutter, Randall and Christopher DeMuth. 1999. *Ozone and the Constitution at EPA*, On the Issues. Washington, D.C.: American Enterprise Institute.

Lutter, Randall and Christopher Wolz. 1997. AUV-B Screening by Tropospheric Ozone: Implications for the National Ambient Air Quality Standard.@ *Environmental Science and Technology* 31(3): 142a-146a.

Morrison, Steven A., Tara Watson, and Clifford Winston. 1998. *Fundamental Flaws of Social Regulation: The Case of Airplane Noise*. Working Paper 98-2. Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies.

Moyle, Petrea. 1999. *Will the EPA's New Pesticide Regulation Decrease Health Risks?* Regulatory Analysis 99-3. Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies.

National Oceanic and Atmospheric Administration. 1994. *Report of the NOAA Panel on Contingent Valuation,* United States Department of Commerce. Rockville, MD. 59 Fed. Reg. 1062, 44, 15 C.F.R. ' 990.

Nichols, Albert L., and Zeckhauser, Richard J. 1986. "The Perils of Prudence." *Regulation* 10(2): 13-24.

Noll, Roger. 1999. The Economics and Politics of the Slowdown in Regulatory Reform. Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies.

Office of Management and Budget. 1996. *Economic Analysis of Federal Regulations Under Executive Order 12866.* Washington, D.C.: Office of Management and Budget.

______. 1999. *Draft Guidelines for the Analysis of Benefits and Costs of Major Final Rules.* Washington, D.C.: Office of Management and Budget.

Sunstein, Cass. 1999. *Is the Clean Air Act Unconstitutional?* Working Paper 99-7. Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies.